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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,408	09/25/2003	Xiaolan Ai	TIMK 8497US	5738

1688 7590 05/04/2005

POLSTER, LIEDER, WOODRUFF & LUCCHESI
12412 POWERSCOURT DRIVE SUITE 200
ST. LOUIS, MO 63131-3615

EXAMINER

LE, DAVID D

ART UNIT	PAPER NUMBER
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3681

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/670,408

Applicant(s)

AI, XIAOLAN

Examiner

David D. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,8 and 10 is/are rejected.
- 7) ☒ Claim(s) 3-7 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This is the second Office action on the merits of Application No. 10/670,408, filed on 25 September 2003. Claims 1-10 are pending.

Documents

2. The following documents have been received and filed as part of the patent application:
- Information Disclosure Statement, received on 12/29/03
 - Information Disclosure Statement, received on 03/19/04

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1-2, 8, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent No. 5,688,201 to Zhou.**

Claims 1-2, 8, and 10:

Zhou (i.e., Figs. 1-4; column 1, line 65 – column 5, line 15) discloses a traction drive of planetary configuration comprising:

- A planetary roller (6) positioned between and in frictional contact with an outer ring member (4) and a sun roller member (2) of a planetary traction drive such as

to communicate rotational motion between the outer ring member and the sun roller member;

- Wherein the planetary roller includes a means for flexibly mounting having a support shaft (56), an elastic wave spring (50) inserted in the planetary roller, and a bearing (66); and
- Wherein the means for flexibly mounting inherently generates an effective supporting stiffness of the planetary roller and an effective contact stiffness at a contact point where the planetary roller contacts the sun roller member and at a contact point where the planetary roller contacts the outer ring member.

5. Claims 1-2, 8 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent No. 3,945,270 to Nelson et al.

Claims 1-2, 8 and 10:

Nelson (i.e., Figs. 1-6; column 5, line 19 – column 11, line 52) discloses a friction drive transmission comprising:

- A plurality of planetary rollers (9, 10, 11) positioned between and in frictional contact with an outer ring member (8) and a sun roller member (6) of a planetary traction drive such as to communicate rotational motion between the outer ring member and the sun roller member;
- Wherein each of the planetary roller includes a means for flexibly mounting having a support shaft (34, 35, or 36), an elastic spring (45) inserted in the planetary roller, and a bearing (33);

- Wherein the means for flexibly mounting inherently generates an effective supporting stiffness of the planetary roller and an effective contact stiffness at a contact point where the planetary roller contacts the sun roller member and at a contact point where the planetary roller contacts the outer ring member; and
- Wherein the structural design of the friction drive transmission is determinable by precise mathematical computation formula (see column 10, line 1 – column 11, line 52).

Allowable Subject Matter

6. Claims 3-7 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments filed on 11 March 2005, regarding claims 1-2, 8 and 10 have been fully considered but they are not persuasive.

Zhou '201 Reference:

First, applicant argues that Zhou'201 discloses a concentric traction drive while the present invention is directed to an eccentric traction drive. Examiner recognizes the differences between Zhou'201 reference and the present invention. However, the present claims 1-2, 8 and 10, as mentioned above, do not reflect this argument.

Second, applicant argues that Zhou'201 fails to disclose a convergent wedge, as recited in the present claim 1. Examiner respectfully disagrees because Zhou'201 does disclose a convergent wedge formed by two raceways 18 and 28, as shown in Fig. 2.

Nelson'270 Reference:

Applicant argues that the elastic spring (45) of Nelson'270 biases the intermediate rollers (9, 10, and 11) toward the small end of the converged wedge between the sun roller (6) and outer roller (8), while the present invention uses the elastic insert (5) to bias the loaded planetary roller away from the small end of the converged wedge between the sun roller and the outer ring. Examiner appreciates the analysis; however, the present claims 1-2, 8 and 10 do not reflect this argument.

Accordingly, the above-applied references meet the claimed limitations.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 571-272-7092. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ddl


CHARLES A. MARMOR
SUPERVISORY PATENT EXAMINER
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